

The retrieval of health records prior to emergency procedures, or even scheduled check-ups, can be a daunting task, resulting in critical delays that put humans at risk. By consolidating records into one secure yet easily accessible platform, the healthcare industry could reduce patient lead-time, enhance efficiency, and ultimately save lives.

### How is this a "Human-Centered "Smart" Service System"?

A "smart" service system is a system that amplifies or augments human capabilities to identify, to learn, to adapt, to monitor, and to make decisions. The **Universal Health Record** system meets those standards by self-organizing people's data, self-monitoring data access, and self-detecting the need for this data.

### Design and Functionality

The UHD is designed to be a web-based application. This design will allow it to function across smart phone devices as well as the conventional Windows device used in a hospital setting

UHD provides easy access to health records. Following admittance to the hospital, the UHD platform scans the secure database for proper records.



Figure 1: Functioning Hospital

### Rationale Behind UHD

The rationale behind UHD is to make the patient queue in hospitals more efficient. Time, money, and lives are reliant on the efficiency of transitioning a patient from the client check-in desk to the healthcare professional's care.

Mentioned in an article from marketwatch.com, patients whose condition indicated they should have been seen in 1 to 14 minutes, according to Emergency Nurses Association guidelines, waited 37 minutes on average to see a physician. This time variation is a crucial problem that can be positively affected by a smart service system dedicated to identifying an individual and immediately accessing their files.

The UHD system is classified by as a smart service system due to its self-identification and self-diagnosing abilities and can be evaluated by its ability to keep records secure, improve process efficiency, and detect patients effectively

Other options considered by not selected include but are not limited to: Nutritional Identifier, Blood Pressure Statistical Analysis, and Emergency Room Tracker

### References:

1. "10 Things Emergency Rooms Won't Tell You." MarketWatch. Accessed March 01, 2016.  
<http://www.marketwatch.com/story/10-things-emergency-rooms-wont-tell-you-2013-12-06>.
2. Bain, Lisa. *Assessing the Impact of Applications of Digital Health Records on Alzheimer's Disease Research*. Place of Publication Not Identified: National Academies Press, 2015.
3. Wegman, David H. *Incorporating Occupational Information in Electronic Health Records: Letter Report*. Washington, D.C.: National Academies Press, 2011.

### What we learned?

Our team learned that a smart service can range in areas of service and vary in functionality. Provided the smart service system helps people identify, learn, adapt, monitor, or make decisions, the application can be made in a wide range of fields such as healthcare, energy, education, and much more.